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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Complete if Known

Application Number	10/565,126
Filing Date	September 18, 2006
First Named Inventor	GRANDI
Group Art Unit	1645
Examiner Name	Baskar

Attorney Docket Number

PP020663.0004

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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		ABBAS et al., <i>Cellular and Molecular Immunology</i> , 4th ed., Chapter 15, pages 360-62, 2000	
		AMARA et al., "Molecular detection of methionine in rat brain using specific antibodies," <i>Neurosci. Lett.</i> 185, 147-50, February 13, 1995	
		ARESCHOUG et al., "Group B streptococcal surface proteins as targets for protective antibodies: identification of two novel proteins in strains of serotype V," <i>Inf. Immun.</i> 67(12), 6350-57, Dec. 1999	
		BANKS et al., "Progress toward characterization of the Group A Streptococcus metagenome: Complete genome sequence of a macrolide-resistant serotype M6 strain," <i>J. Infectious Diseases</i> 190, 727-38, August 15, 2004	
		BARNETT & SCOTT, "Differential recognition of surface proteins in Streptococcus pyogenes by two sortase gene homologs," <i>J. Bacteriol.</i> 184, 2181-91, 2002	
		BARNETT et al., "A Novel Sortase, SrtC2, from Streptococcus pyogenes Anchors a Surface Protein Containing a QVPTGV Motif to the Cell Wall," <i>Journal of Bacteriology</i> , Vol. 186, No. 17, pp. 5865-5875, September 2004	
		BECKMANN et al., "Identification of Novel Adhesins from Group B Streptococci by Use of Phage Display Reveals that C5a Peptidase Mediates Fibronectin Binding," <i>Inf. Immun.</i> 70, 2869-76, June 2002	
		BESSEN et al., "Genomic Localization of a T Serotype Locus to a Recombinatorial Zone Ending Extracellular Matrix-Binding Proteins in Streptococcus pyogenes," <i>Infection and Immunity</i> , Vol. 70, No. 3, pp. 1159-1167, March 2002	
		BLACK et al: "Streptococcus pneumoniae polypeptide coding region"; GENBANK Accession No. AAV42990, November 9, 1998.	
		BLACKBURN et al., "The end of the (DNA) line," <i>Nature Structural Biology</i> 7, 847-49, Oct. 2000	

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		BORK et al., "Powers and pitfalls in sequence analysis: the 70% hurdle," Genome Research 10, 398-400, 2000	
		BOROVEC et al., "Synthesis and assembly of hepatitis A virus-specific proteins in BS-C-1 cells," J. Virol. 67, 3095-301, June 1993	
		BOWIE et al., "Deciphering the message in protein sequences: tolerance to amino acid substitution," Science 257, 1306-10, 1990	
		BRODEUR et al., "Identification of group B streptococcal Sip protein, which elicits cross-protective immunity," Inf. Immun. 68(10), 5610-8, Oct. 2000	
		BURGESS et al., "Possible dissociation of the heparin-binding and mitogenic activities of heparin-binding (acidic fibroblast) growth factor-1 from its receptor-binding activities by site-directed mutagenesis of a single lysine residue," J. Cell Biol. 111, 2129-38, 1990	
		CHUNG et al., "chlorosome protein," NCBI Accession No. 2115394F, July 10, 1992	
		CLANCY et al., "Cloning and Characterization of a Novel Macrolide Efflux Gene, mreA, from Streptococcus agalactiae," Antimicrobial Agents and Chemotherapy 41, 2719-23, 1997	
		COLLINS et al., "Mutation of the principal sigma factor causes loss of virulence in a strain of the Mycobacterium tuberculosis complex," Proc. Natl. Acad. Sci. USA 92, 8036-40, 1995	
		DALE et al., "New Protective Antigen of Gorup A Streptococci," J. Clin. Invest. 103, 1261-68, May 1999	
		DALE et al., "Recombinant, octavalent group A streptococcal M protein vaccine," Vaccine 14, 944-48, 1996	

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		DALE, "Multivalent group A streptococcal vaccine designed to optimize the immunogenicity of six tandem M protein fragments," Vaccine 17, 193-200, 1999	
		DATABASE EMBL, Accession No. AAX13129, Enterococcus faecalis genome contig SEQ ID No: 192, March 19, 1999	
		DATABASE EPO Proteins, EBI Accession No. AX605513, "Sequence 3442 from WO0209818," February 17, 2003	
		DATABASE Geneseq, "Group B Streptococcus protein sequence SEQ ID NO:49," EBI Accession No. GSP:AAV91320, May 30, 2000	
		DATABASE Geneseq, "Streptococcus agalactiae protein, SEQ ID 2382," EBI Accession No. GSP:ADV81242, February 24, 2005	
		DATABASE Geneseq, "Fibrinogen-binding polypeptide, SEQ ID NO:17," EBI Accession No. GSP: ADS93952, December 2, 2004; revised in 2007	
		DATABASE Geneseq, EBI Accession No. GSP: ABP30134, "Streptococcus polypeptide SEQ ID NO:9444," July 2, 2002	
		DATABASE Geneseq, EBI Accession No. GSP: ABP27285, "Streptococcus polypeptide SEQ ID NO:3746," July 2, 2002; revised in 2007	
		DATABASE Geneseq, "Protein encoded by Prokaryotic essential gene #319788," Accession No. ABU46451, June 13, 2003	

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		DATABASE JPO Proteins, "Nucleic acid and protein originating in group B Streptococcus," EBI Accession No. JPOP:BD629260, July 17, 2003	
		DATABASE SWISSPROT[Online] 01 Oct 2002, accession no. EBI, Database accession no. Q9PGX9, Hypothetical protein XF0167	
		DATABASE UniProt [Online] 1 March 2003, "Cell wall surface anchor family protein," retrieved from EBI accession no. UNIPROT: Q8DYR5, Database accession no. Q8DYR5, 87.2% identity with SEQ ID NO:20906	
		DATABASE UniProt [Online], 22 November 2005, "Cell wall surface anchor family protein," retrieved from EBI accession no. UNIPROT: Q3D2D6; 100% identity with SEQ ID NO:20906; abstract	
		DE BOEVER et al., "Enterococcus faecalis conjugative plasmid pAM373. Complete nucleotide sequence and genetic analyses of sec pheromone response," Mol. Microbiol. 37, 1327-41, 2000	
		DITTMER et al., "Treatment of infectious diseases with immunostimulatory oligodeoxynucleotides containing CpG motifs," Curr. Opinion Microbiol. 6, 472-77, Oct. 2003	
		DUEZ, "Enterococcus hirae mraR, pbp3s, mraY, murD, murG, ftsQ and ftsA genes, mraW, ylIC and ftsZ partial genes," GENBANK Accesion No. Y13922, April 18, 2005	
		ELLIS, <i>Vaccines</i> , Chapter 29, Plotkin et al., eds., W.B. Saunders Company (Philadelphia), pages 568-75, 1988	
		EXAMINATION REPORT for NZ 560966, March 4, 2009, 2 pages	

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		FERRETTI et al., "Putative surface exclusion protein," GENBANK Accession No. Q9A1H3, October 31, 2006	
		FERRETTI et al: "Streptococcus pyogenes M1 GAS strain SF370, Section 87 of 167 of the complete genome" DATABASE Accession No. AE006558.	
		GLASER et al., "Genome sequence of Streptococcus agalactiae, a pathogen causing invasive neonatal disease," Mol. Microbiol. 45, 1499-1513, 2002	
		GRANDI & ZAGURSKY, "The impact of genomics in vaccine discovery: achievements and lessons," Expert. Rev. Vaccines 3, 621-23, 2004	
		Grandi, "Genomics and Proteomics in Reverse Vaccines," in <u>Microbial Proteomics: Functional Biology of Whole Organisms</u> , Humphrey-Smith & Hecker, eds., John Wiley & Sons, chapter 20, 2006	
		GREENSPAN et al., "Defining epitopes: It's not as easy as it seems," Nature Biotechnol. 7, 936-37, 1999	
		GUTEKUNST et al., "Analysis of RogB-Controlled Virulence Mechanisms and Gene Expression in <i>Streptococcus agalactiae</i> ," Inf. Immun. 71, 5056-64, September 2003	
		GUTIERREZ et al., "insertional Mutagenesis and Recovery of Interrupted Genes of <i>Streptococcus mutans</i> by Using Transposon Tn917: Preliminary Characterization of Mutants Displaying Acid Sensitivity and Nutritional Requirements," J. Bacteriol. 178, 4166-75, July 1996	
		GUTTIEREZ et al., "Streptococcus mutans ProX (pouABC) gene, partial cds; YlxM (ylxM) gene, complete cds; Ffh (ffh) gene, complete cds, alternatively spliced; SatC (satC) and SatD (satD) gene, complete cds; and SatE (satE) gene, partial cds," GENBANK Accession No. U88582, April 3, 2001	

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		GUZMAN et al., "Protective immune response against <i>Streptococcus pyogenes</i> in mice after intranasal vaccination with the fibronectin-binding protein SfbI," <i>J. Infectious Disease</i> 179, 901-06, 1999	
		HOLMES, "PSMA specific antibodies and their diagnostic and therapeutic use," <i>Exp. Opin. Invest. Drugs</i> 10, 511-10, 2001	
		HONG, "unnamed protein product [<i>Streptococcus pyogenes</i>]," NCBI Accession No. BAB1603, one page, Oct. 3, 2000	
		HORVATH et al., "Toward the development of a synthetic group a streptococcal vaccine of high purity and broad protective coverage," <i>J Med Chem.</i> 2004 Jul 29;47(16):4100-4	
		HUGHS et al., "Identification of Major Outer surface Proteins of <i>Streptococcus agalactiae</i> ," <i>Inf. Immun.</i> 70, 1254-59, March 2002	
		International Preliminary Examination Report for PCT/GB01/04789 (published as WO 02/34771) dated February 17, 2003	
		International Preliminary Examination Report for PCT/GB2003/001882 (published as WO 03/093306) dated August 18, 2004	
		International Preliminary Examination Report for PCT/IB2005/036009 (published as WO 06/042027) dated April 11, 2007	
		International Preliminary Examination Report for PCT/US2003/029167 (published as WO 04/041157) dated March 5, 2005	
		International Preliminary Examination Report for PCT/US2004/024868 (published as WO 05/032582) dated February 6, 2006	

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		International Preliminary Examination Report for PCT/US2004/030032 (published as WO 05/028618) dated March 16, 2006	
		International Search Report for PCT/GB01/04789 (published as WO 02/34771) dated August 27, 2002	
		International Search Report for PCT/GB2003/001882 (published as WO 03/093306) dated November 14, 2002	
		International Search Report for PCT/IB2005/036009 (published as WO 06/042027) dated June 20, 2006	
		International Search Report for PCT/US05/046491 dated June 26, 2007 (published as WO 2006/069200)	
		International Search Report for PCT/US2003/029167 (published as WO 04/041157) dated August 2, 2004	
		International Search Report for PCT/US2004/024868 (published as WO 05/032582) dated October 28, 2005	
		International Search Report for PCT/US2004/030032 (published as WO 05/028618) dated December 6, 2005	
		International Search Report for PCT/US2005/027239 (published as WO 06/078318) dated August 25, 2008	
		International Search Report for PCT/US2007/022838 (published as WO 08/108830) dated October 9, 2008	

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		JOBLING et al., "Analysis of structure and function of the B subunit of cholera toxin by the use of site-directed mutagenesis," <i>Mol. Microbiol.</i> 5, 1755-67, 1991	
		KALMAN et al., "Comparative genomes of Chlamydia pneumoniae and C. trachomatis," <i>Nature Genetics</i> 21, 385-89, April 1999	
		KEHOE et al., "Nucleotide Sequence of the Streptolysin O (SLO) Gene: Structural Homologies between SLO and Other Membrane-Damaging, Thiol-Activated Toxins," <i>Inf. Immun.</i> 55, 3228-32, December 1987	
		KOCH et al., "Complexity and expression patterns of the desmosomal adherins," <i>Proc. Natl. Acad. Sci. USA</i> 89, 353-57, January 1992	
		KUNST et al., "The complete genome sequence of the Gram positive bacterium <i>Bacillus subtilis</i> ," NCBI Accession No. CAB14964, November 20, 1997	
		LACHENAUER et al., "A protective surface protein from the Type V Group B Streptococcus shares N-terminal sequence homology with the Alpha C Protein," <i>Inf. Immun.</i> 64, 4255-60, October 1996	
		LARSSON et al., "Protection against experimental infection with group B streptococcus by immunization with a bivalent protein vaccine," <i>Vaccine</i> 17, 454-58, 1999	
		LAUER et al., "Genome Analysis Reveals Pili in Group B <i>Streptococcus</i> ," <i>Science</i> 309, 105, July 1, 2005	
		LAZAR et al., "Transforming growth factor alpha: mutation of aspartic acid 47 and leucine 48 results in different biological activities," <i>Mol. Cell. Biol.</i> 8, 1247-52, 1988	
		LE PAGE et al., "Streptococcus agalactiae sequence 217 from WO 01/32882, GENBANK Accession No. AX134653, May 29, 2001	

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		LEI et al., "Identification and immunogenicity of group A streptococcus culture supernatant proteins," <i>Inf. Immunity</i> 68, 6807-18, 2000	
		LEWIS, "Riddle of Biofilm Resistance," <i>Antimicrobial Agents and Chemotherapy</i> , Vol. 45, No. 4, pp. 999-1007, April 2001	
		LINDAHL et al., "Surface proteins of Streptococcus agalactiae and related proteins in other bacterial pathogens," <i>Clinical Microbiol. Rev.</i> 18(1), 102-07, Jan. 2005	
		MADOFF et al., "Maternal Immunization of Mice with Group B Streptococcal Type III Polysaccharide-Beta C Protein Conjugate Elicits Protective Antibody to Multiple Serotypes," <i>J. Clinical Invest.</i> 94, 286-92, 1994	
		MAIONE et al., "Identification of a Universal Group B <i>Streptococcus</i> Vaccine by Multiple Genome Screen," <i>Science</i> 309, 148-50, July 1, 2005	
		McMILLAN et al., "Identification and assessment of new vaccine candidates for group A streptococcal infections," <i>Vaccine</i> 22, 2783-90, 2004	
		McMILLAN et al., "Prospecting for new group A streptococcal vaccine candidates," <i>Indian J. Med. Res.</i> 119, 121-25, May 2004	
		MEEHAN & OWEN, "Sequence 1 from Patent WO9801561," GENBANK Accession No. A68631, May 6, 1999	
		MICHEL et al: "Cloned alpha and beta C-protein antigens of group B Streptococci elicit protective immunity"; <i>INFECTION AND IMMUNITY</i> ; vol. 59, no. 6, June 1991; pp 2023-2028.	

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Application Number	10/565,126
Filing Date	September 18, 2006
First Named Inventor	GRANDI
Group Art Unit	1645
Examiner Name	Baskar

Attorney Docket Number PP020663.0004

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		MOLLING et al., "Naked DNA for vaccine or therapy," <i>J. Mol. Med.</i> 75, 242-46, 1997	
		MORA et al., "Group A Streptococcus produce pilus-like structures containing protective antigens and Lancefield T antigens," <i>Proc. Natl. Acad. Sci. USA</i> 102, 15641-46, October 25, 2005	
		MUSSER, "The Next Chapter in Reverse Vaccinology," <i>Nat. Biotechnol.</i> 24, 157-58, 2006	
		NAKAGAWA et al., "Genome sequence of an M3 strain of Streptococcus pyogenes reveals a large-scale genomic rearrangement in invasive strains and new insights into phage evolution," <i>Genome Res.</i> 13, 1042-55, June 2003	
		NAKATA et al., "MsmR, a specific positive regulator of the Streptococcus pyogenes FCT pathogenicity region and cytolysin-mediated translocation system genes," <i>Mol. Microbiol.</i> 57, 786-803, 2005	
		NAVARRE et al., "Surface Proteins of Gram-Positive Bacteria and Mechanisms of Their Targeting to the Cell Wall Envelope," <i>Microbiology and Molecular Biology Reviews</i> , Vol. 63, No. 1, pp. 174-229, March 1999	
		NCBI News, table on page 4, "Microbial Genomes Available for BLAST Search," July 1998	
		OREFICI et al., "Possible virulence marker for Streptococcus agalactiae (Lancefield Group B)," <i>J. Clin. Microbiol. Infectious Diseases</i> 7, 302-05, 1988	
		PAOLETTI et al., "Neonatal mouse protection against infection with multiple group B streptococcal (GBS) serotypes by maternal immunization with a tetravalent GBS polysaccharide-tetanus toxoid conjugate vaccine," <i>Inf. Immun.</i> 62, 3236-43, 1994	

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		PAOLETTI, "Surface structure of group B streptococcus important in human immunity," in <u>Gram Positive Pathogens</u> , Fischetti et al., eds., Chapter 14, pp. 137-53, 2000	
		POURNARAS et al., "Pheromone responses and high-level aminoglycoside resistance of conjugative plasmids of <i>Enterococcus faecalis</i> from Greece," <i>J. Antimicrobial Chemotherapy</i> 46, 1013-16, 2000	
		PRITZLAFF et al., "Genetic basis for the beta-haemolytic cytolitic activity of group B streptococcus," <i>Mol. Microbiol.</i> 39, 236-48, 2001	
		PRITZLAFF et al., "Streptococcus agalactiae cyl gene cluster, partial sequence," GENBANK Accession No. AF157015, February 8, 2001.	
		PROFT et al., "Identification and Characterization of Novel Superantigens from <i>Streptococcus pyogenes</i> ," <i>J. Exp. Med.</i> 189, 89-101, January 4, 1999	
		PUCCI et al., "Enterococcus faecalis strain A24836 cell wall/cell division gene cluster, yllB, yllC, yllD, pbpC, mraY, murD, murG, divlB, ftsA and ftsZ genes, complete cds," GENBANK Accession No. U94707, September 10, 1997	
		QUINN, "The response of rheumatic and non-rheumatic children to streptolysin O concentrate," <i>J. Clin. Invest.</i> 36, 793-802, June 1957	
		RAMACHANDRAN et al., "Two Distinct Genotypes of <i>prtF2</i> , Encoding a Fibronectin Binding Protein, and Evolution of the Gene Family in <i>Streptococcus pyogenes</i> ," <i>Journal of Bacteriology</i> , Vol. 186, No. 22, pp. 7601-7609, November 2004	
		RODEWALD et al., "Neonatal mouse model of group b streptococcal infection," <i>J. Infectious Diseases</i> 166, 635-39, 1992	

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		RODRIGUEZ-ORTEGA et al., "Characterization and identification of vaccine candidate proteins through analysis of the group A Streptococcus surface proteome," <i>Nature Biotechnol.</i> 24, 191-97, 2006	
		ROITT et al., Structure of Antigens, <i>Immunology</i> , 4th ed., Mosby, London, pages 7.7 and 7.8, 1998	
		ROSINI et al., "Identification of novel genomic islands coding for antigenic pilus-like structures in <i>Streptococcus agalactiae</i> ," <i>Mol. Microbiol.</i> 61, 126-41, 2006	
		RUDENKO et al., "Selection for activation of a new variant surface glycoprotein gene expression site in <i>Trypanosoma brucei</i> can result in deletion of the old one," <i>Mol. Biochem. Parasitol.</i> 95, 97-109, 1998; NCBI Accession No. CAD21770	
		RUDINGER et al., "Characteristics of the amino acids as components of a peptide hormone sequence," in <i>Peptide Hormones</i> , Parsons, ed., University Park Press, June 1976, pages 1-7	
		SCHNEEWIND et al., "Sequence and Structural Characteristics of the Trypsin-Resistant T6 Surface Protein of Group A Streptococci," <i>Journal of Bacteriology</i> , Vol. 172, No. 6, pp. 3310-3317, June 1990	
		SCHNEEWIND, "Structure of the Cell Wall anchor of Surface Proteins in <i>Staphylococcus aureus</i> ," <i>Science</i> 268, 103-06, April 7, 1995	
		SEGURA et al., "Streptococcus suis and group B Streptococcus differ in their interactions with murine macrophages," <i>FEMS Immunol. Med. Microbiol.</i> 21, 189-95, 1998	
		SEIZEN, "Multi-domain, cell envelope proteases of lactic acid bacteria," <i>Antonie von Leeuwenhoek</i> 76, 139-55, 1999	
		SIMPSON et al., "Xylella fastidiosa 9a5c, section 136 of 229 of the complete genome," GENBANK Accession No. AE003990, June 4, 2004	

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		SMOOT <i>et al.</i> , "Genome sequence and comparative microarray analysis of serotype M18 group A Streptococcus strains associated with acute rheumatic fever outbreaks," <i>Proc. Natl. Acad. Sci. USA</i> 99, 4668-73, April 2, 2002	
		SPELLERBERG <i>et al.</i> , "Streptococcus agalactiae cyl gene cluster, complete sequence," GENBANK Accession No. AF093787, July 31, 2000	
		SPELLERBERG <i>et al.</i> : "Identification of genetic determinants for the hemolytic activity of Streptococcus agalactiae by ISSI transposition"; <i>J. BACTERIOL.</i> ; vol. 181, no. 10, May 1999; pp 3212-3219.	
		STALHAMMAR-CARLEMALM <i>et al.</i> : "The R28 Protein of Streptococcus pyogenes is related to several group B streptococcal surface proteins, confer protective immunity and promotes binding to human epithelial cells"; <i>Mol. Microbiol.</i> 1, July 1999, pp 208-219.	
		STEPHENSON <i>et al.</i> , "The Fap1 fimbrial adhesin is a glycoprotein: antibodies specific for the glycan moiety block the adhesion of <i>Streptococcus parasanguis</i> in an <i>in vitro</i> tooth model," <i>Mol. Microbiol.</i> 43, 147-57, 2002	
		SU <i>et al.</i> , "Identification of a Xenopus cDNA that prevents mitotic catastrophe in the fission yeast <i>Schizosaccharomyces pombe</i> ," <i>Gene</i> 145, 155-56, 1994	
		Supplementary Search report for EP 03799822 (corresponding to WO 04/041157) dated January 21, 2008	
		SUROVOV & FERRETTI, "Physical and Genetic Chromosomal Map of an M Type 1 Strain of Streptococcus pyogenes," <i>J. Bacteriol.</i> 178, 5546-49, September 1996	
		TAKAMI <i>et al.</i> , "Two component sensor histidine kinase involved in phosphate regulation," NCBI Accession No. NP_244022.1, September 10, 2001	

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Date Considered

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		TETTELIN et al., "Complete genome sequence and comparative genomic analysis of an emerging human pathogen, serotype V Streptococcus agalactiae," Proc. Natl. Acad. Sci. USA 99, 12391-96, September 17, 2002	
		TETTELIN et al., "Complete genome sequence of a virulent isolate of Streptococcus pneumoniae," Science 293, 498-506, 2001	
		TETTELIN et al., DATABASE EMBL, Accession No. AE014193, Streptococcus agalactiae 2603V/R section 3 of 100 of the complete genome, September 2, 2002	
		TETTELIN et al., Swiss-Prot Accession No. Q3DV91 for Streptococcus agalactiae strain 18R21, November 22, 2005	
		TIGHE et al., "Gene vaccination: plasmid DNA is more than just a blueprint," Immunology Today 19, 89-97, Feb. 1998	
		TODD, "Antigenic Streptococcal Hemolysin," J. Exp. Med. 55, 267-80, 1932	
		TON-THAT & SCHNEEWIND, "Assembly of pili on the surface of Corynebacterium diphtheriae," Mol. Microbiol. 50, 1429-38, 2003	
		TON-THAT et al., "Sortases and pilin elements involved in pilus assembly of Corynebacterium diphtheriae," Mol. Microbiol. 53, 251-61, 2004	

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		UniProt Accession No. A7CNQ7, July 5, 2004	
		UniProt Accession No. Q5XEL1, Nov. 23, 2004	
		UniProt Accession No. Q8P318, Oct. 1, 2002	
		VALLET <i>et al.</i> , "The chaperone/usher pathways of <i>Pseudomonas aeruginosa</i> : Identification of fimbrial gene clusters (cup) and their involvement in biofilm formation," <i>PNAS</i> , Vol. 98, No. 12, pp. 6911-6916, June 2001	
		WATNICK <i>et al.</i> , "Steps in the development of a <i>Vibrio cholerae</i> El Tor biofilm," <i>Molecular Microbiology</i> , Vol. 34, No. 3, pp. 586-595, 1999	
		WESSELS <i>et al.</i> , "Stimulation of protective antibodies against type 1a and 1b group B streptococci by a type 1a polysaccharide-tetanus toxoid conjugate vaccine," <i>Inf. Immun.</i> 61, 4760-66, 1993	
		WOODSON <i>et al.</i> , "Analysis of a ribose transport operon from <i>Bacillus subtilis</i> ," <i>Microbiology</i> 140, 1829-38, 1994	
		ZHONG <i>et al.</i> , "Hypothetical protein of <i>Arabidopsis thaliana</i> ," NCBI Accession No. AAD29767, May 11, 1999	

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